

<b>Course name: CENG410 Data Mining</b>				<b>Department: Computer Engineering</b>				
<b>Semester</b>	<b>Methods of Education</b>							<b>Credit (ECTS)</b>
	Lecture Hour	Recitation/ (Etud)	Lab	Project/ Field Study	Homework	Other	Total	
2021 – 2022 Fall	28	-	14	28	50	30	150	5
<b>Language</b>	English							
<b>Compulsory/Elective</b>	E							
<b>Prerequisites</b>	-							
<b>Face to Face Lecture</b>	-							
<b>Online</b>	3							
<b>Course Contents</b>	<p>Week 1 – Introduction to data mining and tools</p> <p>Week 2 – Data Types and statistical measures</p> <p>Week 3 – Data preprocessing and cleaning</p> <p>Week 4 – Data import to tools from different environments (databases, flat files)</p> <p>Week 5 – Exploring data and visualization</p> <p>Week 6 – Classification 1</p> <p>Week 7 – Classification 2</p> <p>Week 8 – Association rule mining 1</p> <p>Week 9 – Association rule mining 2</p> <p>Week 10 – Clustering 1</p> <p>Week 11 – Clustering 2</p> <p>Week 12 – Clustering 3</p> <p>Week 13 – Anomaly detection</p> <p>Week 14 – Recommendation systems</p> <p>Week 15 – Review</p>							
<b>Course Objectives</b>	The course aims to teach data mining methods. Different from classic machine learning courses, it gives more importance to data and visualization. Other differences are association rules and clustering concepts.							
<b>Learning Outcomes and Competences</b>	<p>Lectures will try to give examples in 3 different tools.</p> <ul style="list-style-type: none"> <li>- Python</li> <li>- R</li> <li>- Weka</li> </ul>							
<b>Textbook and /or References</b>	<p>Introduction to Data Mining (2nd Edition)</p> <p>Pang-Ning Tan, Michael Steinbach, Anuj Karpatne, Vipin Kumar</p>							
<b>Assessment Criteria</b>								%
	Homework							40
	Final							60
<b>Instructors</b>	Dr. Atilla Özgür							